ABSTRACT

Provided is a technology for helping safe driving and realizing automatic driving of vehicles, or for counting the number of passing vehicles on the road or monitoring those passing vehicles for their driving. Using a plurality of cameras mounted in a vehicle or provided above a road, even if the relationship between the road plane and the respective cameras constantly changes in relative position or posture due to camera vibration or a change in road tilt, any obstacles located on the road such as other vehicles ahead, parked vehicles, and pedestrians on the road are detected without confusing those with textures including white lines, road signs, paint, road stains, and shadows of roadside objects, all of which do not disturb vehicle driving. An obstacle detection device 10 is structured by an image input section 11 for receiving images from a plurality of image pick-up devices 101, a correspondence detection section 12 for finding a plurality of pairs of corresponding points from the received right and left images, the slope degree calculation section 13 for calculating a slope degree of a plane including the corresponding points, and a result determination section 14 for determining as there being an obstacle when the calculated slope degree is larger than a predetermined value.